

Lifetime of Stark States Hydrogen Atom in Magnetic Field.

September 15, 2004

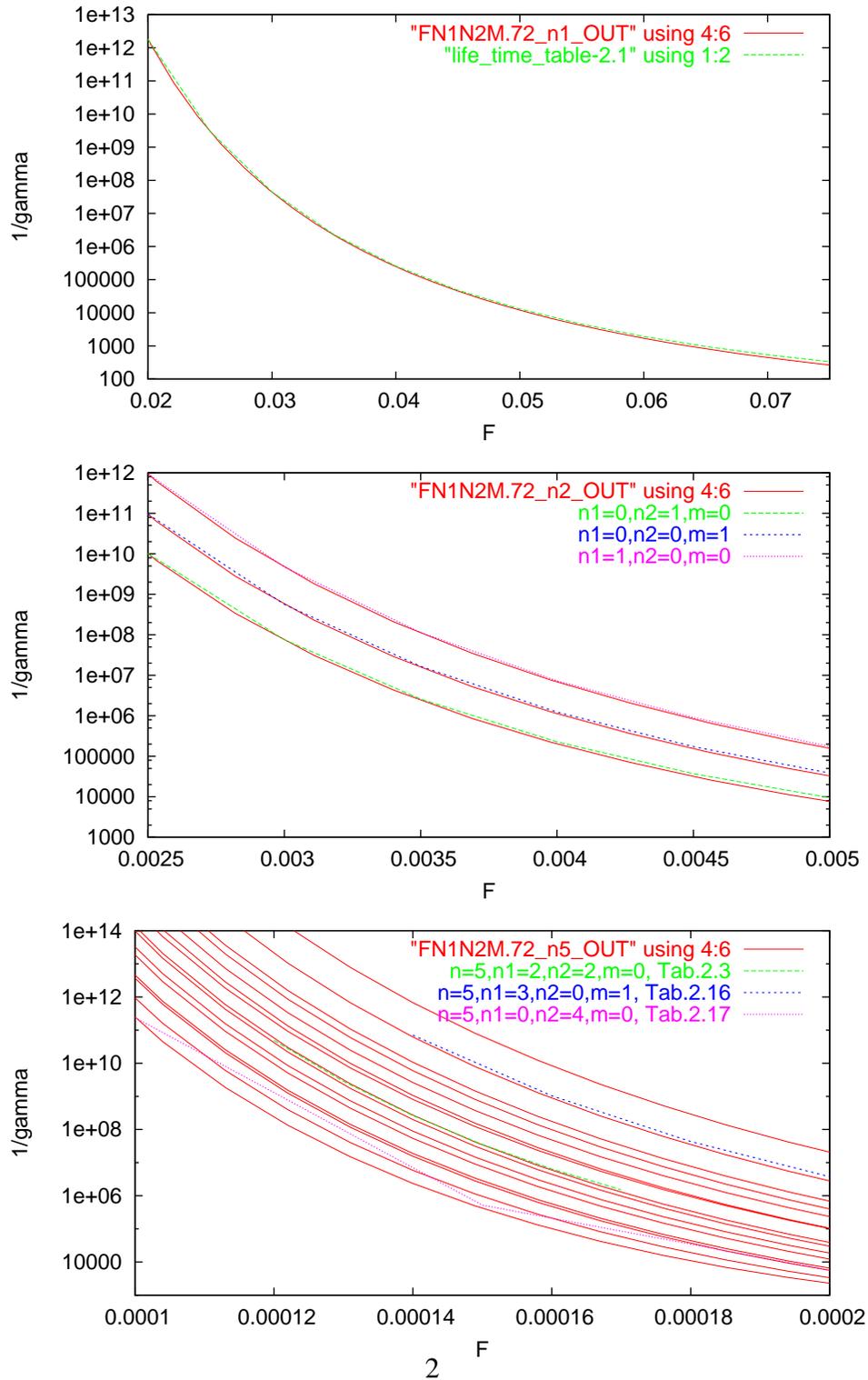


Figure 1: Comparison of calculated lifetime $T=1/\Gamma$ of Stark states hydrogen atom using “exact numerical solution” and using equation 72 for $n=1$ (top, Table 2.1), $n=2$ (middle, Table 2.2) and $n=5$ (bottom, Table 2.3, 2.16 and 2.17). Atomic units are used.

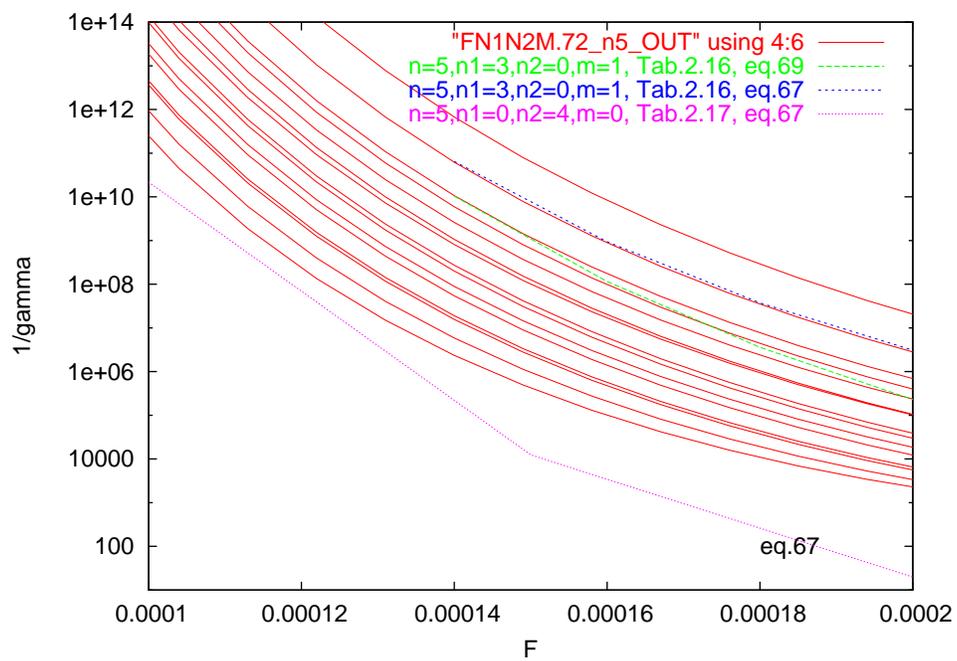


Figure 2: Comparison of calculated lifetime $T=1/\Gamma$ using equation 67, 69 and 72 for $n=5$ (Table 2.16 and 2.17). Atomic units are used.

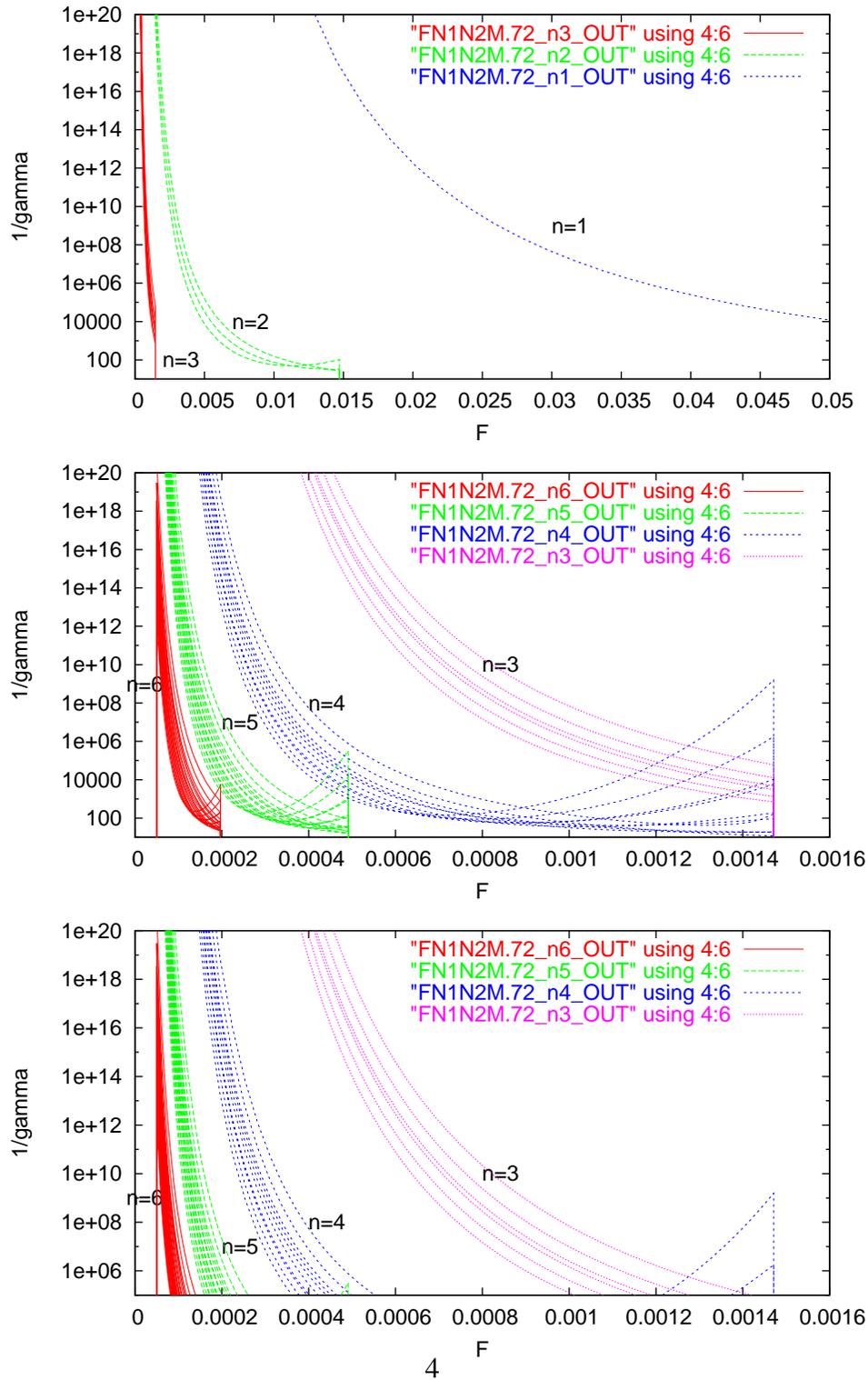


Figure 3: Calculated lifetime $T=1/\Gamma$ of Stark states hydrogen atom in magnetic field using equation 72. Top - $n=1-3$, middle and bottom $n=3-6$. Atomic units are used.

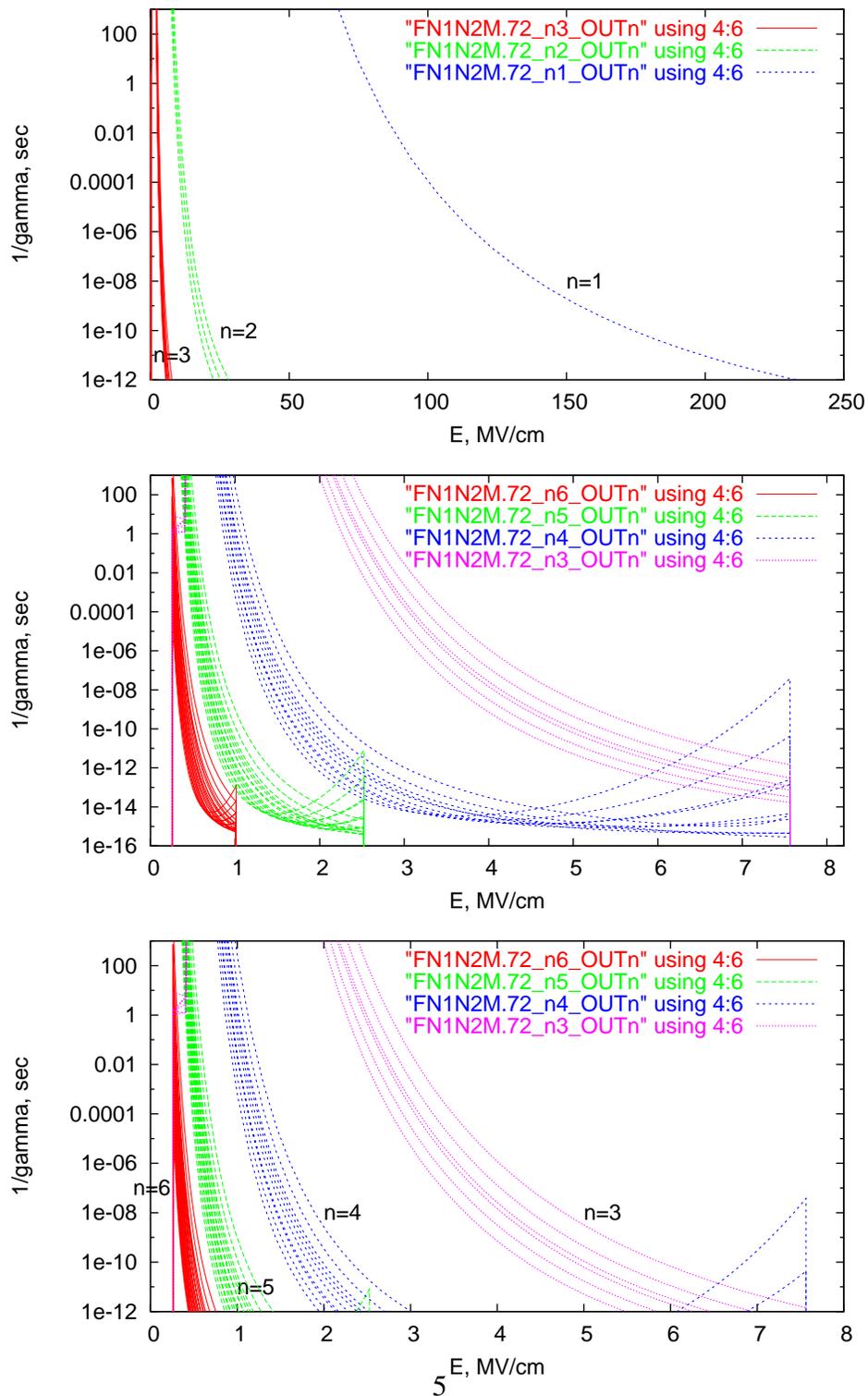


Figure 4: Calculated lifetime $T=1/\Gamma$ of Stark states hydrogen atom in magnetic field using equation 72. Top - $n=1-3$, middle and bottom $n=3-6$.

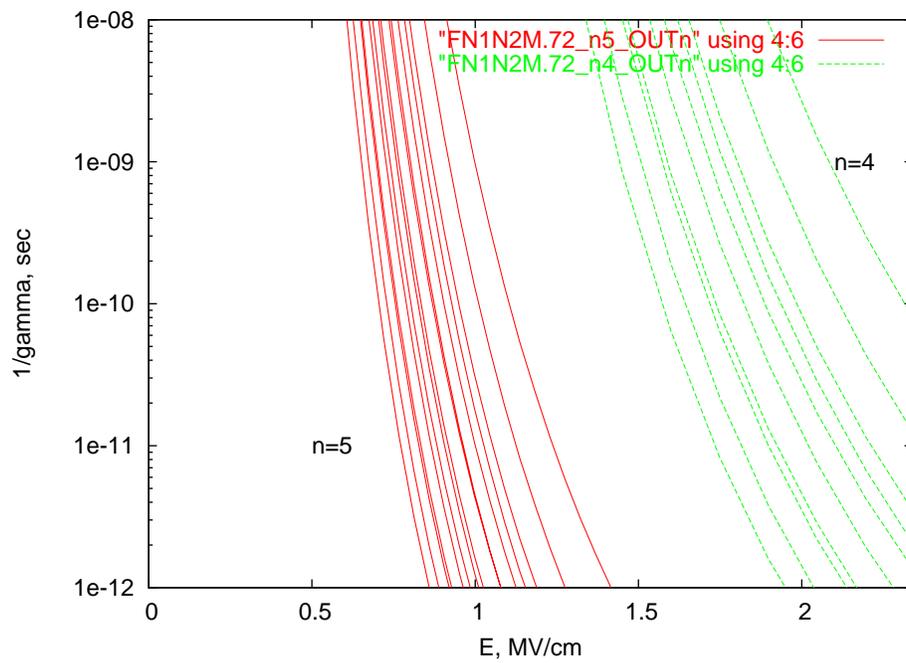


Figure 5: Calculated lifetime $T=1/\Gamma$ of Stark states hydrogen atom in magnetic field using equation 72 for $n=4$ and $n=5$.